

U.S. Serial No. 09/882,138
Filed: June 15, 2001

Docket No. 26769-01A
Examiner: J. Amini

REMARKS

This Amendment is being filed in response to the outstanding Office Action dated March 20, 2006. Reconsideration and allowance of the application in view of the amendments made above and remarks to follow is earnestly solicited.

At this time claims 1, 3- 4, 6-8, 12-18, 22-24 and 28-44 are pending in this application. Claims 1, 3, 22 and 28 have been amended. The claims have been amended to respond to the Examiner's objections and to more clearly define the invention. No new matter is believed to have been added by virtue of these amendments.

Claim Objections

Claim 1 was objected to because it repeated the word the on page 3, lines 1-2. Applicant has amended the claim to eliminate this redundancy.

The Examiner objected to claims 42 and 43 because the word "first" had been repeated. Applicant respectfully traverses this objection. Claims 42 and 43 disclose buffer regions associated with the first and second image segments. The buffer regions are made up of pixels from two adjacent image segments. Accordingly, a first buffer associated with the first image segment comprises the first first buffer region comprising pixels from the first image segment and a second first buffer region comprising pixels from the second image segment and a second buffer associated with the second image segment comprises the first second buffer region comprising pixels from the first image segment and the second second buffer region comprising pixels from the second image segment. Although there appears to be redundant use of the word "first" that redundancy is required in order to clearly define the invention.

Claim Rejections under 35 U.S.C. § 112

Claim 29 stands rejected under 35 U.S.C. § 112 for failing to comply with the enablement requirement. Specifically, the Examiner asserts that the phrase "the percentage of modulation per in-scan pixel" is not described in the specification in such a way as to enable

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one skilled in the art to which it pertains to make and/or use the invention. Applicant respectfully traverses this rejection.

Page 8, lines 15-18 of the specification disclose that the ramp rate is the rate at which the recording beam intensity will be varied across the buffer region and it is measured in percentage of modulation per in-scan pixel. The specification at page 11, line 31 to page 12, line 1 further discloses that the change in intensity is caused by modulating the laser output. The specification beginning at page 8, line 18 also includes an example showing how the ramp rate is calculated and measured. The specification describes that for a buffer region comprised of 32 pixels, the rate at which the recording beam intensity will be varied (ramp rate) is calculated by the formula 100% (the total change in modulation) divided by 32 (the total number of pixels in the buffer.) This formula indicates that the intensity of the laser beam (ramp rate) changes by 3.125% from recording one pixel to the next. Applicant thus respectfully submits that this example, when read in context with the specification, provides one of skill in the relevant art a sufficient description of how ramp rate is measured to enable the use of the claimed invention. Therefore, reconsideration and withdrawal of the Section 112 rejection is respectfully requested.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 3-4, 6-8, 12-18, 22-24, 28 and 30-44 stand rejected under 35 U.S.C § 103(a) as being unpatentable over Kumashiro (U.S. Patent No. 5,721,624) in view of Kanno (U.S. Patent No. 6,263,118) Applicant respectfully disagrees.

Independent claims 1, 22, 28 and 41 are directed to and claim devices for and methods of combining image segments by, among other things, modifying the intensity of the pixels printed in a buffer region by respective increasing and decreasing ramp values. Such intensity modification is performed during the printing steps.

As best understood, the Office Action concedes that Kumashiro does not describe or suggest modifying the pixel intensity values while printing as claimed, and thus cites the Kanno patent to fill this deficiency. However, Applicant respectfully submits Kanno falls short of describing these claimed features as well.

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In particular, as best understood, it appears from the Office Action that Kanno is cited for among other things, a description of a gamma correction section as being equivalent to Applicant's claimed modulation of pixel intensity. Applicant respectfully submits that there is no relevant correlation between the described gamma correction section and the claimed modification of pixel intensity.

Specifically, Kanno describes at col. 10, lines 29-31 a gamma correction section as a section 96d for correcting the recording density characteristic of the printer section 6. Applicant notes that recording density is commonly defined by those skilled in the art as bits per inch while the claimed invention brings about a change in intensity by changing the amount of laser light that is actually directed to the photosensitive surface. Applicant respectfully fails to see the equivalence suggested in the Office Action at page 6. As such, Applicant respectfully submits that the claimed invention is patentably distinct from Kumashiro in view of Kanno. Further, even if one defines density and intensity similarly, something to which the Applicant respectfully submits is improper, there is no description or suggestion in Kanno that the correction to the recording density is the result of using an increasing and decreasing change in the intensity of the laser (ramp value) in the specified manner, as claimed. In fact, Kanno is entirely silent on how corrections to recording density are brought about.

In addition, nothing in the cited art describes the capability to modify the intensity of the pixels **while** printing. For example, Kanno describes that all corrections made by the gamma corrections section are made prior to an image being printed. For example, at column 24, lines 23-32, Kanno describes an image processing section 96, of which the gamma detection section 96d is a part, which corrects the ground density of the images, highlights the edges of the images and corrects the recording density characteristics of the printer section, and **then** supplies the data to the image direction detection means, all of which is prior to printing. Thus, Kanno describes that the data is not corrected while printing but **prior to** printing. Accordingly, Applicant respectfully submits that independent claims 1, 22, 28 and 41, which specifically claim modifying (by increasing and decreasing ramp values) the intensity of the pixels in a specific way within the buffer regions during printing is patentable over Kumashiro in view of Kanno and notice to this effect is earnestly solicited.

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Lastly, Applicant takes this opportunity to thank the Examiner for his suggestions noted throughout the Office Action. However, at the moment, Applicant respectfully submits that the claims are allowable over the cited art in view of the fact that the cited art does not describe or suggest the overlapping as claimed or the increasing and decreasing of pixel intensity in the overlapping region while printing, as claimed. The failure of such descriptions or suggestions by the cited art is respectfully submitted to render the claims allowable, and notice of this effect is earnestly solicited.

Applicant also respectfully reserves its right to argue the appropriateness of the combination of references in the first place. However, in view of the remarks above, Applicant respectfully submits such a discussion at this time is unnecessary.

Because the independent claims are believed to be allowable over the prior art of record for the reasons provided above, claims 3-4, 6-8, 12-18, 23-24, 29-40 and 42-44 which depend directly or indirectly from these claims are also believed to be allowable over the prior art of record. However, for a complete record, Applicant also respectfully disagrees with the assertions made by the Examiner regarding many of the rejected dependent claims. However, for the purpose of streamlining prosecution, these claims are not discussed in detail, but Applicant reserve all rights to continue to respectfully dispute the descriptions of the references as they pertain to these claims.

For all of these reasons, it is believed that claims 1, 3-4, 6-8, 12-18, 22-24, 28 and 30-44 are patentable over Kumashiro in view of Kano. Therefore, reconsideration and withdrawal of the rejection of claims 1, 3-4, 6-8, 12-18, 22-24, 28 and 30-44 as being unpatentable over Kumashiro in view of Kanno is respectfully requested.

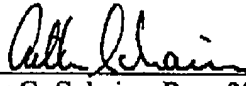
Applicant has made a sincere and diligent effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited. However, if any issues still remain, the Examiner is respectfully requested to telephone the undersigned to resolve such issues prior to issuing another office action.

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Early and favorable action is earnestly solicited.

Respectfully submitted,

By: 
Arthur G. Schaier, Reg. 37,715
Attorney for Applicant(s)
Carmody & Torrance LLP
50 Leavenworth Street
P.O. Box 1110
Waterbury, CT 06721-1110
(203) 575-2629